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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michael Graupe

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06/22/2006

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EXAMINER

ANDERSON, REBECCA L

ART UNIT

PAPER NUMBER

1626

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/719,080	<b>Applicant(s)</b> GRAUPE ET AL.	
	<b>Examiner</b> Rebecca L. Anderson	<b>Art Unit</b> 1626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
     4a) Of the above claim(s) 5,7,11-13,19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8-10,14,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 1-4, 6,8-10 and 14-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/18/05</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

Claims 1-20 are currently pending in the instant application. Claims 5, 7, 11-13, 19 and 20 are withdrawn from consideration as being for non-elected subject matter. Claims 1-4, 6, 8-10 and 14-18 are objected. Claims 1-4, 6, 8-10, 14, 17 and 18 are rejected.

***Election/Restrictions***

Applicant's election with traverse of Group I, and the further election of the compound, morpholine-4-carboxylic acid (R)-1-[(S)-1-(1-benzooxazol-2-yl-methanoyl)-propylcarbamoyl]-1-phenylmethanesulfonyl-ethyl ester in the reply filed on 7 April 2006 is acknowledged. The traversal is on the ground(s) that there is no serious burden for the Examiner to search all of the claims of Groups I to III. This is not found persuasive because the inventions are independent and distinct because there is no patentable co-action between the groups and a reference anticipating one member will not render another obvious. Each group is directed to art recognized divergent subject matter which require different searching strategies for each group. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

Therefore, as stated on pages 3 and 4 of the restriction requirement, the election of Group I and the compound morpholine-4-carboxylic acid (R)-1-[(S)-1-(1-benzooxazol-2-yl-methanoyl)-propylcarbamoyl]-1-phenylmethanesulfonyl-ethyl ester results in the following as the elected invention for search and examination.

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**The elected invention for search and examination is:** the products of the formula (I) in which:

**X1** is  $\text{-NHC(R1)(R2)X3}$ ;

**R1** is hydrogen or (C1-6)alkyl;

**R2** is selected from the group consisting of hydrogen, -R12, -R14,

**R12** is hydrogen, (C1-5)alkyl or halo-substituted (C1-6)alkyl

**R14** is (C3-10)cycloalkyl(C0-6)alkyl, (C6-10)aryl(C0-6)alkyl or (C9-10)bicycloaryl(C0-6)alkyl;

**X3** is benzooxazol-2-ylcarbonyl;

**X7** is hydrogen;

**R3** is  $\text{C(R6)(R6)X6}$ ;

**R6** is hydrogen or (C1-6)alkyl

**X6** is  $\text{X5S(O)}_2\text{R14}$

**X5** is a bond or (C1-6)alkylene; and

**X2** is morpholin-4-ylcarbonyloxy.

The remaining subject matter of claims 1-4, 6, 8-10 and 14-18 that is not drawn to the above elected invention and the subject matter of claims 5, 7, 11-13, 19 and 20 stands withdrawn under 37 CFR 1.142(b) as being for non-elected subject matter. The remaining compounds which are not within the elected invention, which are independent and distinct from the elected invention and do not have unity with the elected compound and are therefore withdrawn by means of a restriction requirement within the claims are,

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for example, the compounds of the formula (I) X1 is  $-NHX_4$ ; X2 is hydrogen, fluoro, OH, NHR15 or NR17R18; X3 is cyano,  $-C(R_6)(OR_6)_2$ , X4 is a heteromonocyclic ring, etc

The above mentioned withdrawn compounds which are withdrawn from consideration as being for nonelected subject matter differ materially in structure and composition from the compounds of the elected invention. The withdrawn compounds differ from those of the elected invention, such as by furanyl, thienyl, thiomorpholine, piperazine, etc. which are chemically recognized to differ in structure and function. This recognized chemical diversity of the compounds can be seen by the various classification of these compounds in the U.S. classification system, i.e. class 549 subclass (200)+ furanyl, class 549 subclass (1)+ thienyl, etc. Therefore, again, the compounds which are withdrawn from consideration as being for non-elected subject matter differ materially in structure and composition and have been restricted properly as a reference which anticipated but the elected subject matter would not even render obvious the non-elected subject matter.

These withdrawn compounds are independent and distinct from the elected invention and do not have unity with the species elected and are therefor withdrawn by means of a restriction requirement within the claims.

The requirement is still deemed proper.

### ***Claim Objections***

Claims 1-6, 8-10 and 14-18 are objected to as containing non-elected subject matter. Claims 1-6, 8-10 and 14-18 presented drawn solely to the elected invention as

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identified supra as **the elected invention for search and examination** would overcome this objection.

Claims 14 and 16 are objected to because of the following informalities: the Markush expression in the claims is improper, i.e. the claim should read-selected from the group consisting of: A; B; C;.....and Z; or their corresponding N-oxides....., not as instantly written as selected from the group consisting of: A; B; C;...; Z; and their corresponding N-oxides..... Also, claim 16 should read as, selected from the group consisting of: A; B; C; ..... and Z not as instantly written as, selected from the group consisting of: A; B; C; ....Z. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 6, 8-10, 14, 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the compound of the formulas (I), its stereoisomer, prodrug and pharmaceutically acceptable salt and solvate thereof does not reasonably provide enablement for the N-oxide derivative, any prodrug derivative, protected derivative, individual isomer or mixture of isomers. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. § 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

#### **The nature of the invention**

The nature of the invention is the compounds of the formula I and its N-oxide derivatives, prodrug derivatives, protected derivatives, individual isomers and mixtures of isomers, and pharmaceutically acceptable salts and solvates thereof.

#### **The state of the prior art and the predictability or lack thereof in the art**

The state of the prior art is that an isomer is any compound having the same composition, including constitutional isomers, which are compounds whose atoms are connected differently and stereoisomers. Constitutional isomers can contain different functional groups in varying positions. The term "derivative" found in the claims is defined as a compound, usually organic obtained from another compound by a simple chemical process or an organic compound containing a structural radical similar to that from which it is derived (Hackh's chemical dictionary, 1972). Therefore, the term "derivative" found in the claims renders the claims indefinite because it is unclear what compounds are being claimed, i.e. what similar radical is found in the derivative of hydroxamic acid of the formula (I) and encompassed by the instant claims

**The amount of direction or guidance present and the presence or absence of working examples**

The only direction or guidance present in the instant specification is for the compound of the formula I, its stereoisomers, prodrugs and pharmaceutically acceptable salts or solvates of the compound. There is no data present in the instant specification for an alternate definition to the term derivative, nor the preparation of constitutional isomers, or protected derivatives or N-oxide derivatives of the instant compound of the formula I.

**The breadth of the claims**

The instant breadth of the rejected claims is broader than the disclosure, specifically, the instant claims include any isomer, i.e. any compound with the same number of each atom or any compound containing a structural radical similar to that from the compounds of the formula (I)

**The quantity or experimentation needed and the level of skill in the art**

While the level of the skill in the pharmaceutical arts is high, it would require undue experimentation of one of ordinary skill in the art to prepare any isomer or derivative of the formula I as instantly claimed since an isomer of the compounds of the formula I need only have the same composition of atoms, not necessarily the same order of atoms and can have varying functional groups in varying positions. The only guidance present in the instant specification is for the compound of the formula I and its stereoisomer, prodrug and pharmaceutically acceptable salt and solvate thereof. There is no guidance or working examples present for constitutional isomers or derivatives of



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the formula I. Therefore, the claims lack enablement and this rejection can be overcome, for example, by deleting the phrase "and the N-oxide derivatives, prodrug derivatives, protected derivatives, individual isomers and mixtures of isomers;" from the instant claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6, 8, 9, 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the terms "comprises" found in the claims, for example, "X4 comprises" renders the products indefinite as the term comprising is considered open-ended language and therefore is including additional subject matter in the compounds of the formula I that is not described in the instant specification and is not particularly pointed out or distinctly claimed. A claim to a chemical compound cannot be open-ended, but must be claimed with precision. For example, an alkyl group comprising 1 to 6 carbon atoms can be read to include additional atoms and groups other than carbon and alkyl, however, the identity of the additional atoms or groups and how to determine the identity of the additional atoms or groups is not pointed out or distinctly claimed. This rejection can be overcome by amending the claims to include only the elected invention for search and examination.

### **Conclusion**

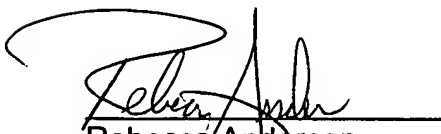
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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rebecca L. Anderson whose telephone number is (571) 272-0696. Mrs. Anderson can normally be reached Monday through Friday 5:30AM to 2:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Joseph K. McKane, can be reached at (571) 272-0699.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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